

Appl. Serial No. 10/675,559

Reply to Office Action Mailed March 28, 2006

REMARKS

In the Office Action dated March 28, 2006, claims 1-3, 6, 15, 16, 20, 28, 29, 37, and 38 were rejected under 35 U.S.C. § 103 over "Admitted Prior Art" (APA) in view of U.S. Patent No. 3,298,716 (Taylor); claims 8-13, 21-26, 30-35, and 40-45 were rejected under § 103 over APA in view of Taylor and U.S. Patent No. 6,861,131 (Evans); and claims 8, 9, 14, 21, 22, 27, 30, 31, 36, 40, 41, and 46 were rejected under § 103 over APA in view of Taylor and U.S. Patent No. 6,384,128 (Wadahara).

The obviousness rejection of each of the independent claims is based on the asserted combination of "Admitted Prior Art" (APA) and Taylor. Specifically, the Office Action referred to the "Related Art" section of the present application, in which a description is provided regarding failure of a seal in a control line connection. The "Related Art" section further discusses that a prior art downhole seal can include a rubber or elastomeric seal, a metal-to-metal seal, and a seal that depends upon fluidic pressure. The remaining portion of the "Related Art" section of the present application indicates that these prior art seals are often unreliable or not suitable for certain applications. Importantly, there is absolutely no suggestion whatsoever in the "Related Art" section of a preload member to apply a force to and induce cold flow of a thermoplastic seal to seal against the outer surface of a cable, as recited in the claims.

Recognizing that the APA fails to disclose or even remotely suggest this claim feature, the Office Action instead relied upon Taylor. 3/28/2006 Office Action at 2. Reference was made by the Office Action to a thermoplastic seal 19 and metal ferrules 11, 12 that abut ends of the seal 19 in Taylor. However, aside from picking and choosing isolated disclosures in the cited references, the Office Action has failed to cite any objective evidence of the required motivation or suggestion to combine the teachings of APA and Taylor. The Office Action made a conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the APA by utilizing a seal assembly including a thermoplastic seal and adjacent ferrule, and a preload member (threaded mandrel) for inducing cold flow of the thermoplastic seal for improved sealing between the housing and cable or control line." *Id.* at 3.

This conclusion is unsubstantiated by any actual evidence. Clearly, neither Taylor nor APA even remotely suggests a preload member to apply a force to and *induce cold flow of a thermoplastic seal to seal against the outer surface of the cable*. Because the Office Action has

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failed to cite to any motivation or suggestion to combine the teachings of APA and Taylor, a *prima facie* case of obviousness has clearly not been established with respect to each of the independent claims. See M.P.E.P. § 2143 (8<sup>th</sup> ed., Rev. 3), at 2100-135.

It is well established that the PTO has the burden of establishing a *prima facie* case of obviousness. See *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2D 1596 (Fed. Cir. 1988). The PTO can satisfy this showing only by establishing that "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *Id.* Here, rather than cite to objective evidence establishing the motivation or suggestion to combine APA and Taylor, the Office Action instead relied upon the disclosure of the present invention, using impermissible hindsight to piece together the unrelated teachings of the references to achieve the claimed invention. Such an obviousness rejection based on impermissible hindsight is clearly prohibited. See *id.* at 1075 (holding that one cannot use impermissible hindsight to pick and choose among isolated disclosures in the prior art references to deprecate the claimed invention).

Although Taylor teaches sealing at a coupling 6 between two pipes 1 and 2 (see Figs. 1 and 2 of Taylor), there is no suggestion in Taylor of using its mechanism to seal against an outer surface of a cable. Similarly, the APA fails to provide any suggestion of a preload member to apply a force to and induce cold flow of a thermoplastic seal. It is thus clear that a *prima facie* case of obviousness has not been established against claim 1.

With respect to independent claim 15, APA and Taylor do not teach or suggest inducing cold flow deformation of a component formed of a thermoplastic to create a fluidic seal against the outer surface of a control line.

With respect to independent claim 28, APA and Taylor do not teach or suggest a seal member deformed by cold flow about at least a portion of a ferrule to seal against the outer surface of a control line.

With respect to independent claim 38, APA and Taylor do not teach or suggest a deformed thermoplastic seal member that provides a fluidic seal against a housing and a cable.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. In view of the allowability of the independent claims over APA and Taylor, it is respectfully submitted that the § 103 rejections over APA, Taylor, and Evans, and over APA, Taylor, and Wadahara have also been overcome.

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Moreover, with respect to dependent claims 8-13, 21-26, 30-35, and 40-45, the Office Action conceded that APA and Taylor fail to disclose the additional subject matter recited in these claims. However, the Office Action relied upon Evans as disclosing the additionally recited subject matter. With respect to claims 10-13, 23-26, 32-35, and 42-45, the Office Action conceded that "APA as modified by Taylor" fails to disclose the thermoplastic material as PEEK, PEK, PPS, or PEKEEK. 3/28/2006 Office Action at 3. The Office Action made the unsupported statement that the "specific thermoplastic material is not a critical feature of the applicant's invention, and the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art." *Id.*

It is noted that the present Specification states that thermoplastic materials according to some embodiments having a flexural modulus that is  $\geq 500$  psi at room temperature are suitable for downhole applications. Examples of such materials include PEEK, PPS, PEK, and PEKEEK. Neither APA nor Taylor even remotely suggests that these types of recited thermoplastic seals can be used. The Office Action cited Evans as purportedly disclosing these types of thermoplastic materials. However, Evans is directed to a completely different teaching with respect to thermoplastic materials. Evans relates to manufacturing high quality composite materials from fibrous materials. There is absolutely no suggestion whatsoever that the thermoplastic materials listed in column 11 of Evans can be used in a downhole application. The Office Action has thus engaged in impermissible hindsight to piece together isolated teachings of references when no motivation or suggestion existed to make the combination.

A similar defect exists in the obviousness rejection of claims 8, 9, 21, 22, 30, 31, 40, and 41 over APA, Taylor, and Evans.

With respect to dependent claims 8, 9, 14, 21, 22, 27, 30, 31, 36, 40, 41, and 46, the Office Action conceded that APA and Taylor fails to disclose the additional recited subject matter. Instead, the Office Action relied upon Wadahara as disclosing the additional subject matter. 3/28/2006 Office Action at 4. Specifically, with respect to dependent claims 14, 27, 36, and 46, the Office Action conceded that APA and Taylor fail to teach a thermoplastic seal that comprises PET. Instead, the Office Action relied upon Wadahara as disclosing the use of PET. There existed absolutely no suggestion to combine the teachings of APA, Taylor, and Wadahara. APA and Taylor provide absolutely no suggestion whatsoever of using PET in a thermoplastic seal. Wadahara, on the other hand, relates to a thermoplastic resin composition capable of

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providing a thin walled molded article having a desired flame retardancy. There existed no suggestion in Wadahara that it would even be desirable to incorporate its PET material in an application providing a seal around a cable or control line.

Therefore, the obviousness rejection of these claims is defective. A similar defect exists with respect to dependent claims 8, 9, 21, 22, 30, 31, 40, and 41 over APA, Taylor, and Wadahara.

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (SHL.0272US).

Respectfully submitted,

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